TITLE: OPTICAL DEMULTIPLEXER CIRCUIT AND DEMULTIPLEXER DEVICE AND OPTICAL WAVELENGTH DIVISION MULTIPLEX CIRCUIT
INVENTORS: Takaharu TOMITA
SERIAL NO.: Unassigned
DOCKET NO.: 21.1925C

FIG. 1A

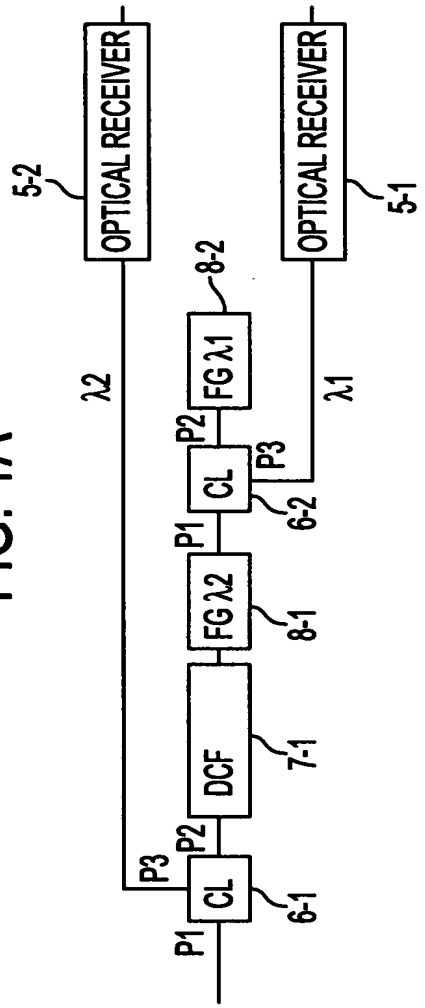

FIG. 1B

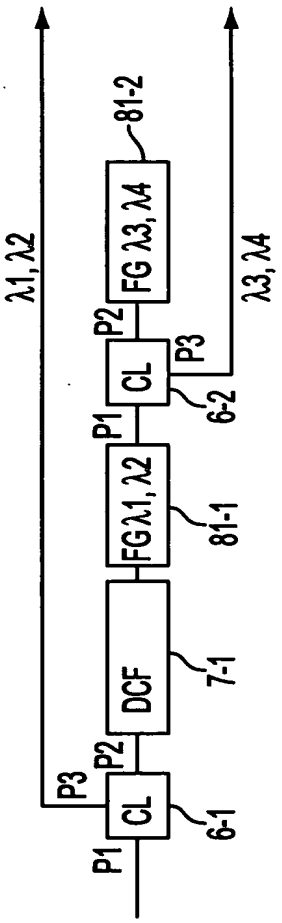

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FIG. 2

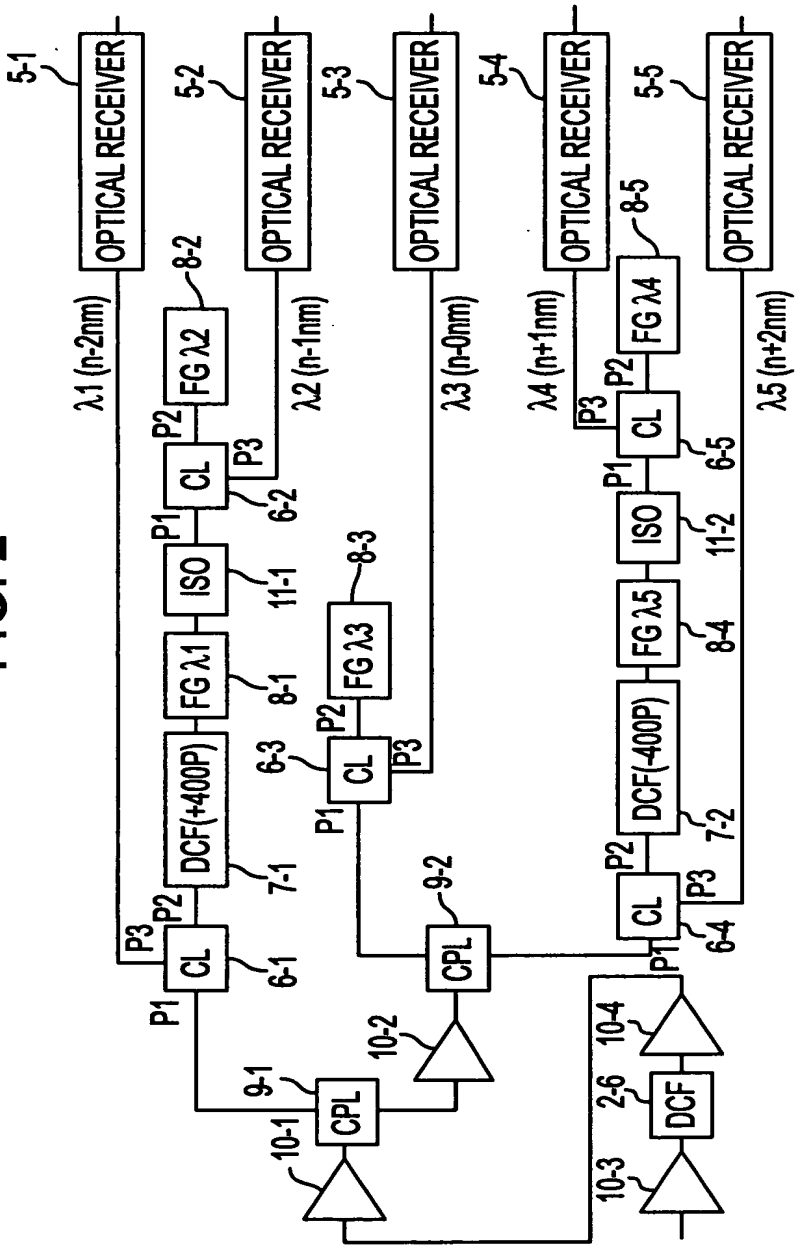

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FIG. 3

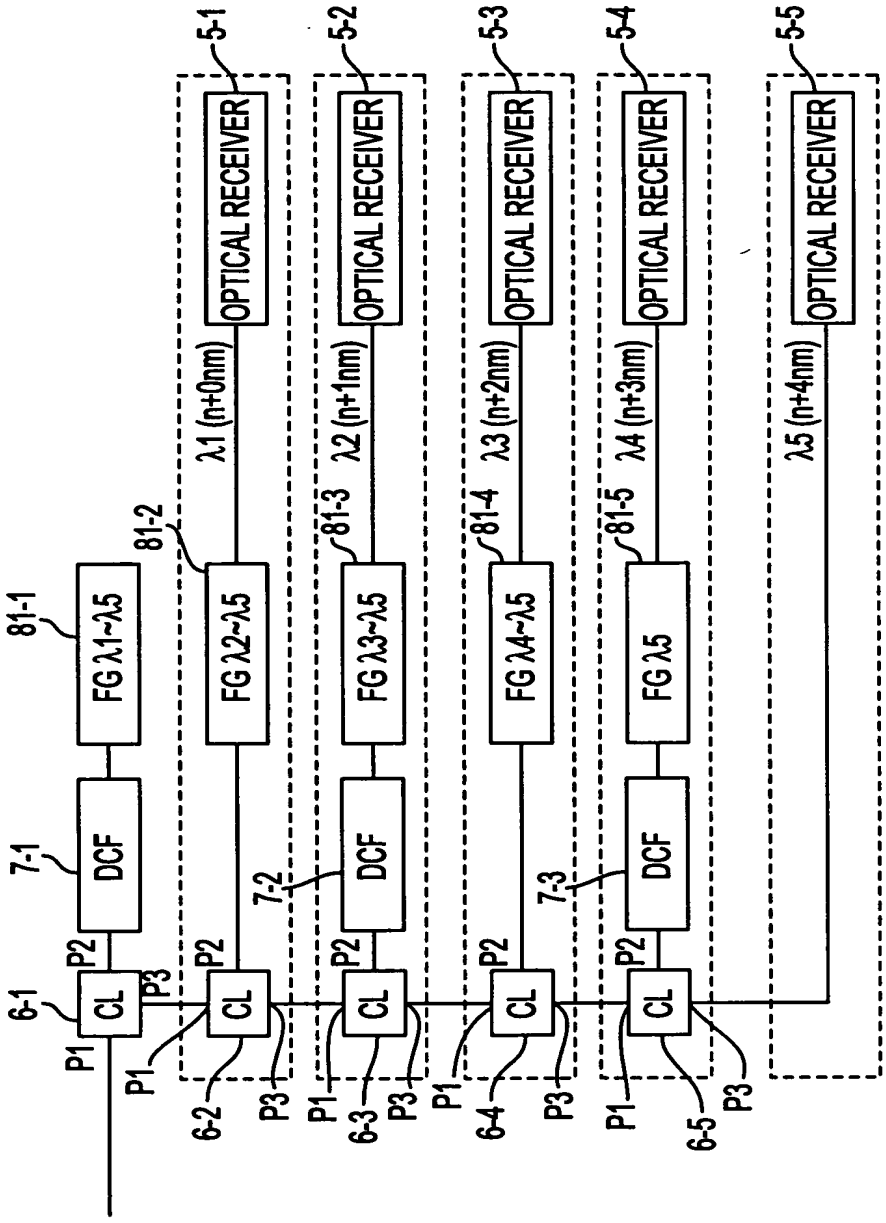

FIG. 4

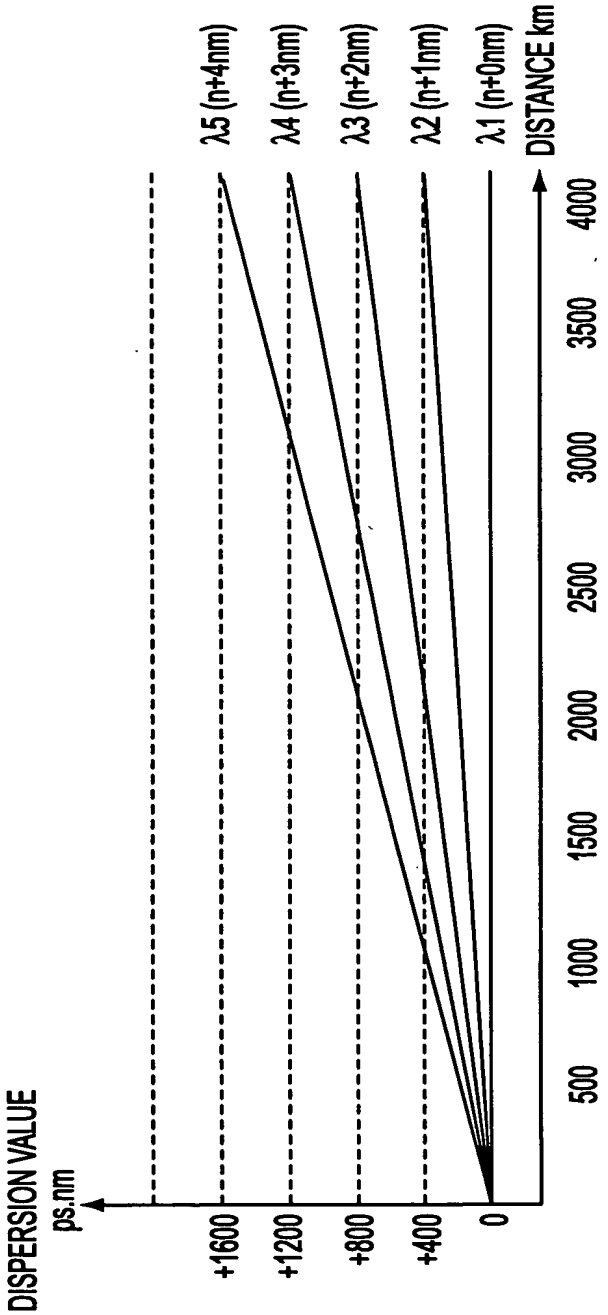
DISPERSION VALUE
ps.nm
+1600
+1200
+800
+400
0
λ5 (n+4nm)
λ4 (n+3nm)
λ3 (n+2nm)
λ2 (n+1nm)
λ1 (n+0nm)
DISTANCE km
500
1000
1500
2000
2500
3000
3500
4000

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FIG. 5

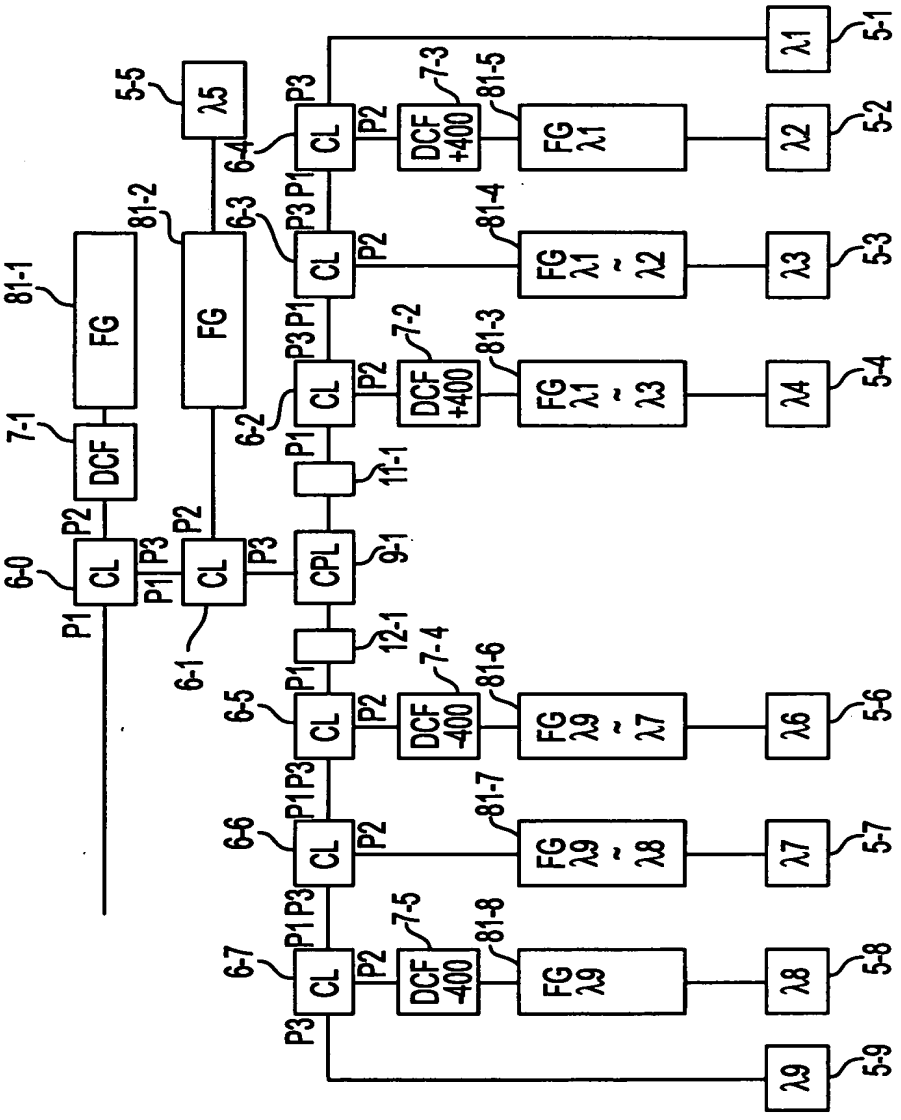

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FIG. 6A

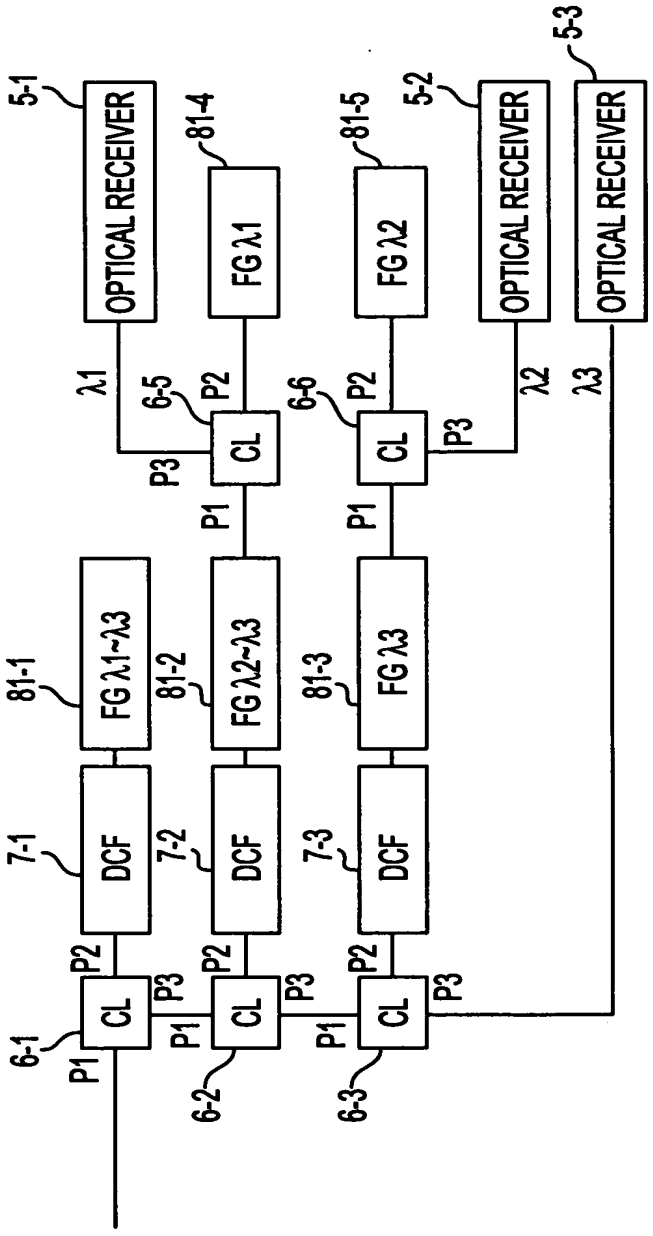

FIG. 6B

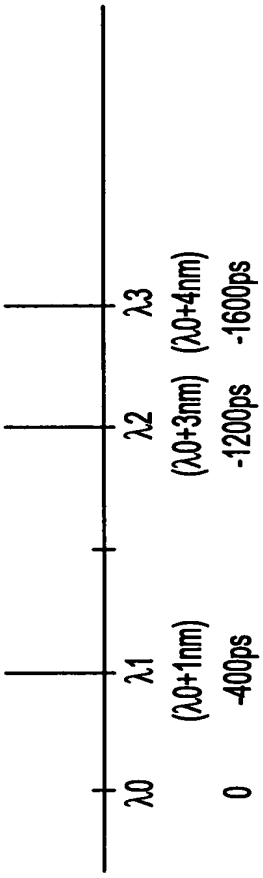

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FIG. 7

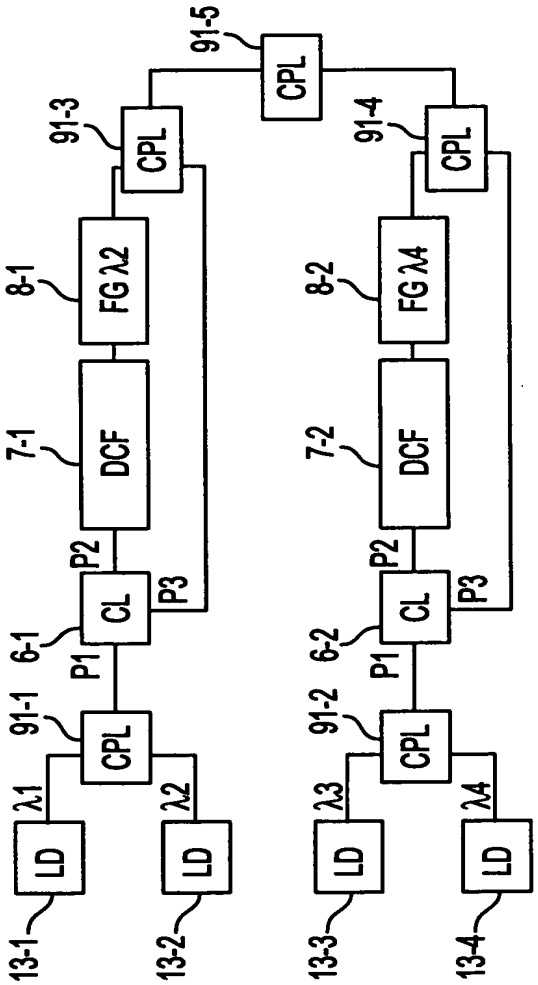

FIG. 8

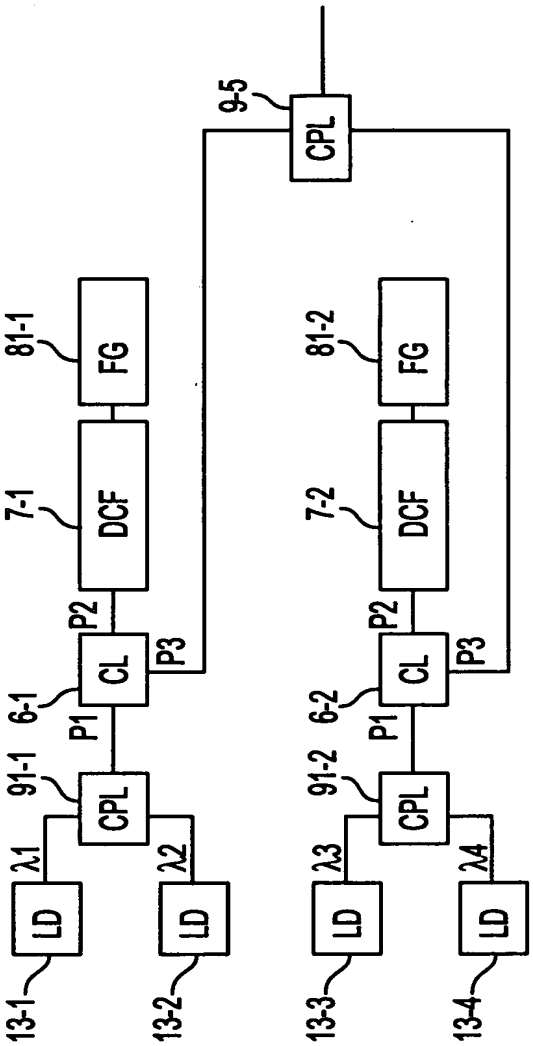
9-5
CPL
81-1
FG
81-2
FG
7-1
DCF
7-2
DCF
P2
P2
P3
P3
6-1
CL
6-2
CL
P1
P1
91-1
CPL
91-2
CPL
λ1
λ2
λ3
λ4
LD
LD
LD
LD
13-1
13-2
13-3
13-4

FIG. 9

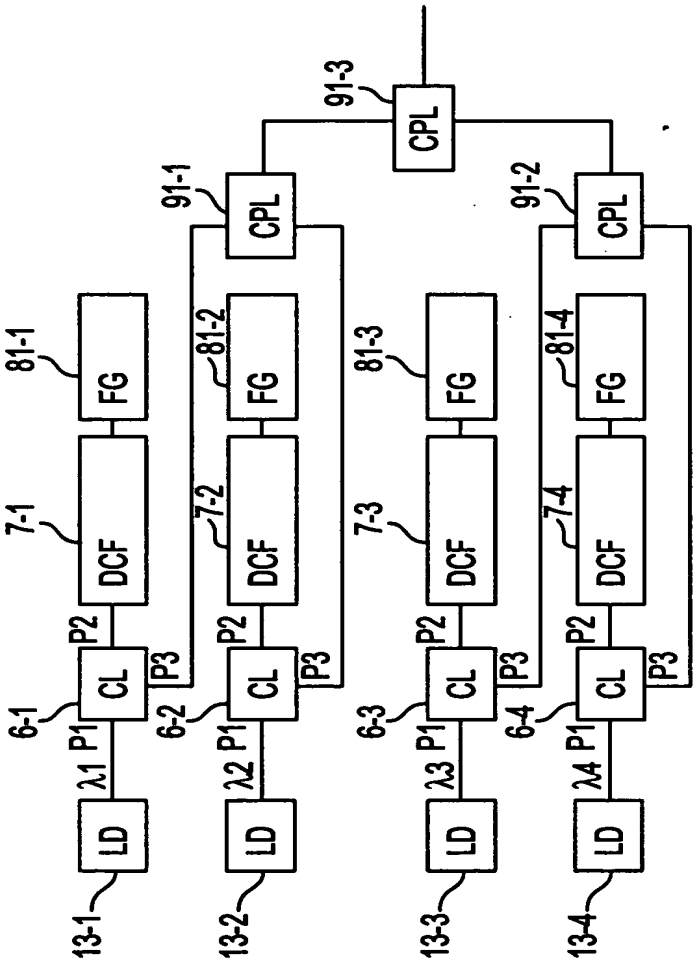
91-3
CPL
91-1
CPL
91-2
CPL
81-1
FG
81-2
FG
81-3
FG
81-4
FG
7-1
DCF
7-2
DCF
7-3
DCF
7-4
DCF
P2
P3
P2
P3
P2
P3
P2
P3
6-1
CL
6-2
CL
6-3
CL
6-4
CL
P1
P1
P1
P1
λ1
λ2
λ3
λ4
LD
LD
LD
LD
13-1
13-2
13-3
13-4

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FIG. 10
PRIOR ART

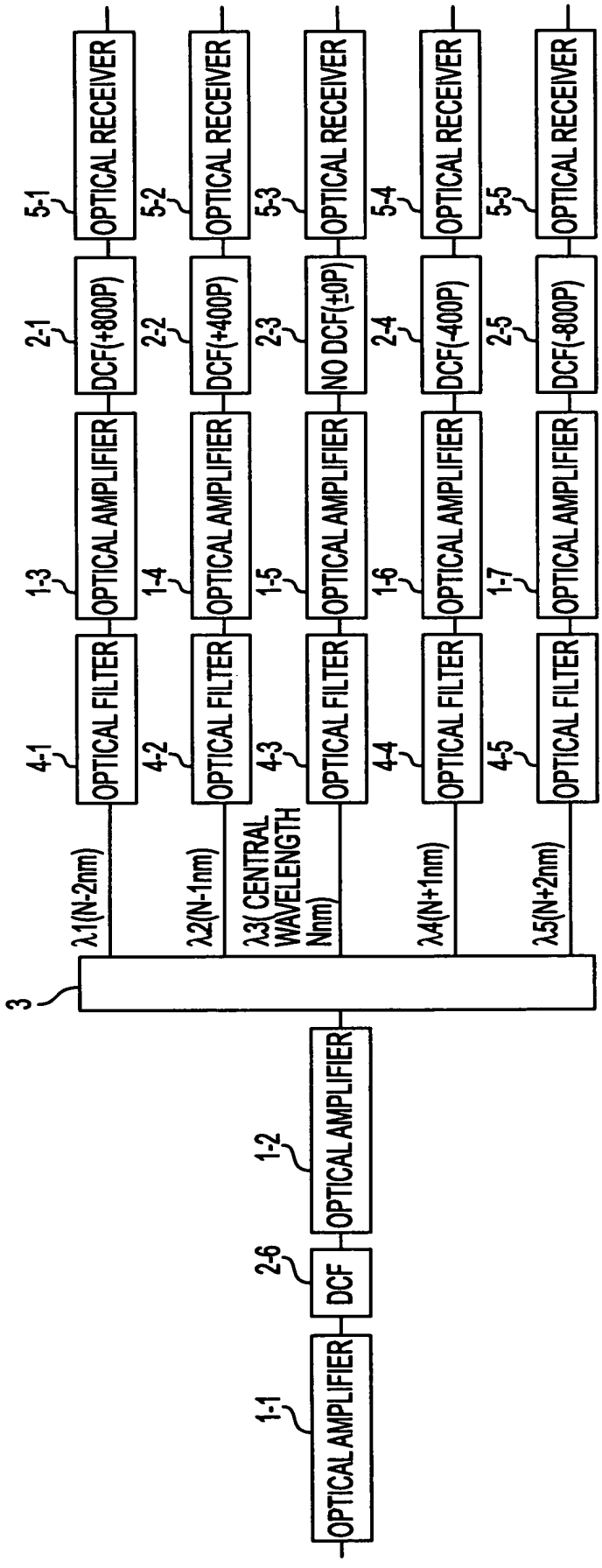


FIG. 11

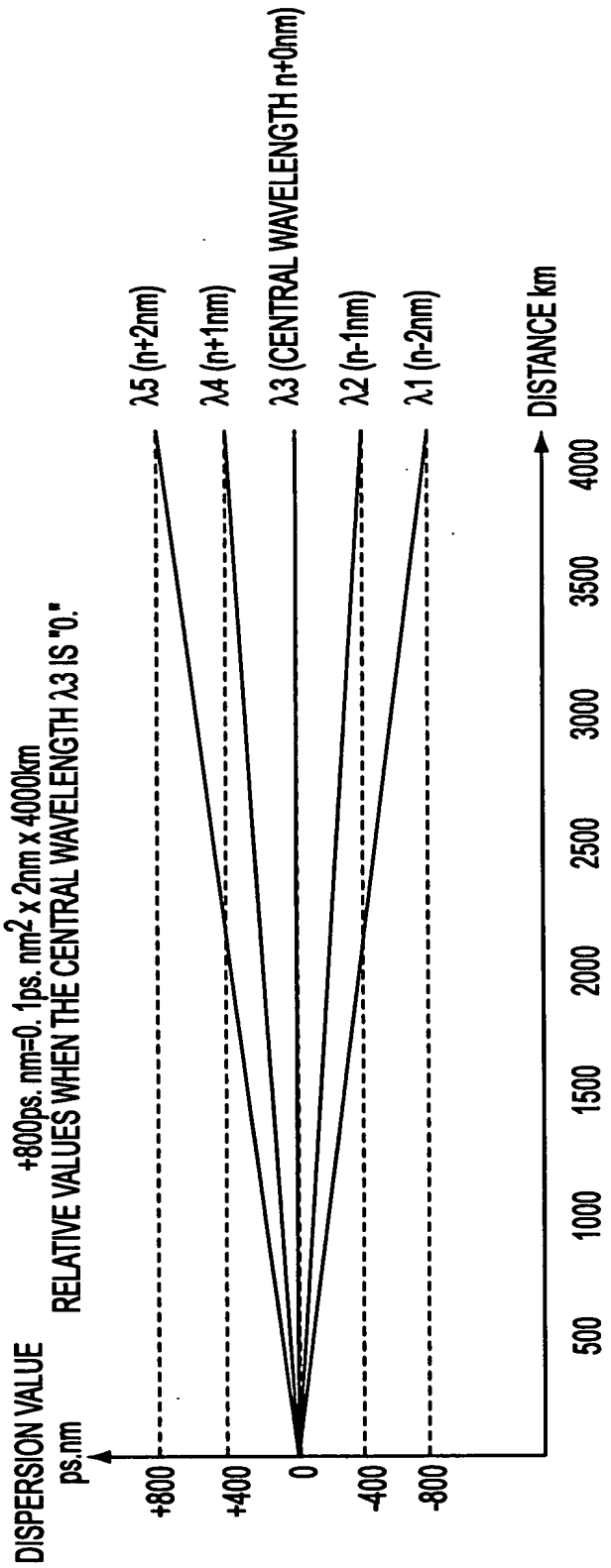
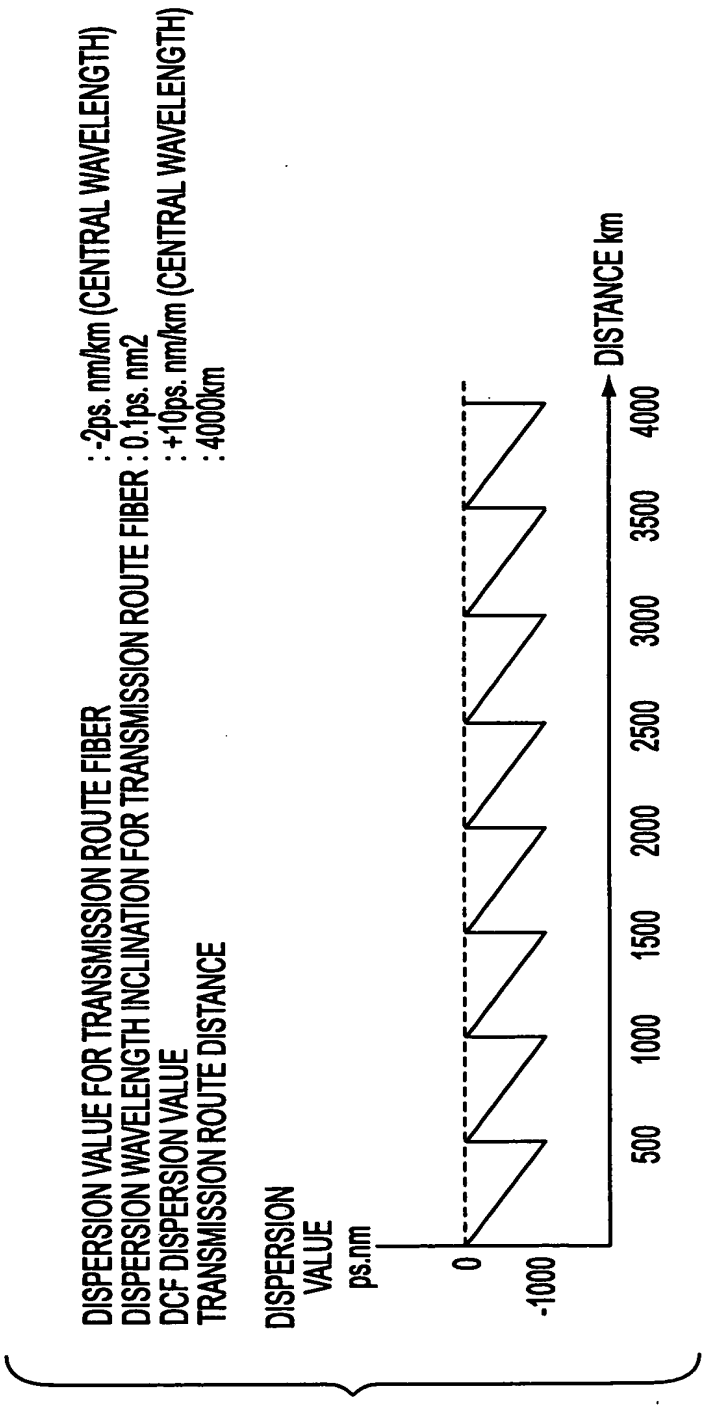

DISPERSION VALUE
ps.nm
+800ps. nm=0. 1ps. nm^2 x 2nm x 4000km
RELATIVE VALUES WHEN THE CENTRAL WAVELENGTH λ3 IS "0."
λ5 (n+2nm)
λ4 (n+1nm)
λ3 (CENTRAL WAVELENGTH n+0nm)
λ2 (n-1nm)
λ1 (n-2nm)
DISTANCE km
+800
+400
0
-400
-800
500
1000
1500
2000
2500
3000
3500
4000

FIG. 12


DISPERSION VALUE FOR TRANSMISSION ROUTE FIBER : -2ps. nm/km (CENTRAL WAVELENGTH)
DISPERSION WAVELENGTH INCLINATION FOR TRANSMISSION ROUTE FIBER : 0.1ps. nm2
DCF DISPERSION VALUE : +10ps. nm/km (CENTRAL WAVELENGTH)
TRANSMISSION ROUTE DISTANCE : 4000km
DISPERSION VALUE ps.nm
0
-1000
500
1000
1500
2000
2500
3000
3500
4000
DISTANCE km